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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/576,903

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James Donald Law

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6147

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7590

04/01/2009

EXAMINER

KREINER, MICHAEL B

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/576,903	<b>Applicant(s)</b> LAW ET AL.	
	<b>Examiner</b> Michael Kreiner	<b>Art Unit</b> 3644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11, 14, 16-24 and 26 is/are rejected.
- 7) ☒ Claim(s) 12, 13, 15, 25 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Examiner's Comment***

1. The Examiner was unable to reach the Applicant at the telephone number 011-64-3322-5023 to offer an Allowance by Examiner's Amendment. The Applicant can place the application in condition for allowance by making the following amendments to the claims:

- Add "wherein the short-circuit current flow heats the wire to a melting temperature of the wire" to claims 1 and 18.
- Change "the or each pair" in the second-to-last line of claim 18 and lines 2-3 in claim 16 to "the at least one pair".
- Change "of said wire connecting" in the second-to-last line of claim 26 to "of said wire with the short-circuit current flow connecting".

The above suggested amendments distinguish the application from the prior art (see rejection below), which teaches using electrodes to complete a short-circuit and detonate a charge, but does not teach short-circuiting the wire to heat the wire until it melts and severs.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-11, 14, 16-24, and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Emigh et al. (U.S. Pat. No. 4,407,467).

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Regarding claim 1, Emigh et al. teach a wire-strike system including: a wire cutter including at least one pair of electrodes 48, electrically insulated from each other and mounted to an outer surface of an aircraft, said electrodes being connectable to a power source (fig. 5) capable of generating an electrical potential difference between the electrodes and in the event of a wire-strike, supplying a short-circuit current flow through a portion of said wire connecting both electrodes (col. 3 *l.* 60-63).

Regarding claims 2 and 19, Emigh et al. teach said electrodes are attached to an electrically insulated mounting base portion 42 (col. 3 *l.* 32-33).

Regarding claims 3-4 and 20, Emigh et al. teach said base portion and electrodes are formed as an elongated strip, wherein the electrodes are elongated and located adjacent, but spaced apart from each other and parallel to each other (fig. 4).

Regarding claims 5 and 6, Emigh et al. teach at least one pair of said wire cutter electrodes are formed as an entrapment element 42 (col. 3 *l.* 25-30), capable of guiding a wire, for severing, into a notched intersection (col. 3 *l.* 45-48) between convergent deflector portions located either side thereof (fig. 3).

Regarding claim 7, Emigh et al. teach electrodes located on said deflector portions and/or said intersection are formed with an outward cutting edge (col. 3 *l.* 55-60).

Regarding claim 8, Emigh et al. teach electrodes of opposing polarity are positioned on opposing sides of said intersection (figs. 3 and 4).

Regarding claims 9 and 24, Emigh et al. teach said wire cutter includes a plurality of electrode pairs, independently energizable by said power source (col. 4 *l.* 16-22).

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Regarding claim 10, Emigh et al. teach said plurality of electrode pairs are capable of being simultaneously energized (by powering all at the same time, or completing each circuit simultaneously).

Regarding claim 11, Emigh et al. teach said plurality of electrode pairs are capable of being selectively energized (col. 4 *l.* 16-22).

Regarding claim 16, Emigh et al. teach an electrical power source and electrical connections between said power source and the or each pair of wire cutter electrodes (fig. 5).

Regarding claim 17, Emigh et al. teach an aircraft provided with a wire-strike system as claimed in claim 1 (fig. 1).

Regarding claim 21, Emigh et al. teach said electrodes are fixed directly to electrically non-conductive portions of the aircraft's surface (fig. 1).

Regarding claim 22, Emigh et al. teach wherein said wire cutter electrodes are positioned on one or more leading surfaces of an aircraft (fig. 1).

Regarding claim 23, Emigh et al. teach said at least one pair of said wire cutter electrodes are formed as an entrapment element 42, capable of guiding a wire for severing into an intersection between convergent deflector portions located either side thereof, said entrapment elements being positioned at one or more entrapment positions about the aircraft's surface (fig. 3).

Regarding claim 18, Emigh et al. teach an aircraft provided with a wire-strike system including:

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- a wire cutter including at least one pair of electrodes 48, electrically insulated from each other and mounted upon an outer surface of the aircraft (figs. 1 & 4), said electrodes being connected to a power source capable of generating an electrical potential difference between the electrodes and in the event of a wire-strike (fig. 5), supplying a short-circuit current flow through a portion of said wire connecting both electrodes (col. 4 *l.* 2-4);

- an electrical power source 50, and

- electrical connections between said power source and the or each pair of wire cutter electrodes (figs. 4 & 5).

Regarding claim 26, Emigh et al. teach a method of severing a wire impacting an aircraft in a wire-strike, using a system including:

a wire cutter including at least one pair of electrodes 48, electrically insulated from each other and mountable upon an outer surface of an aircraft (figs. 1 & 4), said electrodes being connected to an electrical power source, said method including:

generating an electrical potential difference between the elements (fig. 5);

and in the event of a wire-strike, supplying a short-circuit current flow through a portion of said wire connecting both elements (col. 4 *l.* 2-4); and

heating said portion of said wire connecting both elements until said wire at least partially melts and severs (charge 44 explodes, heating the wire until it breaks, col. 1 *l.* 55-61).

***Allowable Subject Matter***

3. Claims 12, 13, 15 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Kreiner whose telephone number is (571)270-5379. The examiner can normally be reached on Monday-Friday 9am-5:00pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Mansen can be reached on (571)272-6608. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael R Mansen/  
Supervisory Patent Examiner, Art Unit 3644

/M. K./  
Examiner, Art Unit 3644